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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,600	09/03/2004	Chung Tae Kim	YPL-PT019	2853

3624 7590 06/29/2007
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EXAMINER

LOVEL, KIMBERLY M

ART UNIT	PAPER NUMBER
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2167

MAIL DATE	DELIVERY MODE
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06/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,600	Applicant(s) KIM, CHUNG TAE	
	Examiner Kimberly Lovel	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This communication is in response to the Amendment filed 27 March 2007.
2. Claims 1-23 and 34 are pending in the current application. Claims 1, 8, 12, 16, 20, 23 and 34 are independent. In the Amendment filed 27 March 2007, claims 1-6, 8, 11-13, 16-18, 20, 23 and 34 were amended and claims 24-33 were canceled. This action is made Final.
3. The prior art rejections made of record regarding claims 1-23 and 34 in the Office Action dated 22 November 2006 have been withdrawn as necessitated by amendment.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-23 and 34 rejected under 35 U.S.C. 102(e) as being anticipated by US PGPub 2007/0038612 to Sull et al (hereafter Sull).**

Referring to claim 1, Sull discusses a method of constructing a multimedia database method, comprising:

(a) receiving a start point [starting frame number] and an end point [finishing frame number] of each of a plurality of first semantic units [segments] of multimedia data, the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest meaningful unit for searching for multimedia data (see [0030] and [0067]);

(b) receiving at least one keyword [metadata] for each of the first semantic units (see [0160]);

(c) receiving a start point and an end point of at least one second semantic unit of the multimedia data, the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search [the metadata of segments can form a hierarchical structure where the larger segment contains the smaller segments] (see [0030]; [0061]; and [0204]); and

(d) storing the keyword together with the start point and the end point of its corresponding first semantic unit and second semantic unit, wherein the user controls a granularity of the keyword-based search result with the same keyword by requesting one of the first semantic unit and the second semantic unit be presented (see [0166] and [0169]).

Referring to claim 2, Sull discloses the method of claim 1 further comprising (e) receiving a start point and an end point of at least one third semantic unit, the third semantic unit including at least two second semantic units and being associated with keywords of second semantic units that are included in the third semantic unit such that the third semantic unit can be presented to the user upon the keyword-based search, wherein in step (d), a keyword is stored with the start point and the end point of its corresponding third semantic unit, wherein the user further controls a granularity of the keyword-based search result with the same keyword by requesting one of the first semantic unit, the second semantic unit and the third semantic unit be presented [As with metafile 3302, metafile 3304 groups the elements in a hierarchical structure (a and b into d, and c and d into e)] .

Referring to claim 3, Sull discloses the method of claim 1 further comprising (f) receiving titles of each of the first semantic units and the second semantic unit, wherein in step (d), the keyword is stored with the titles of its corresponding first semantic unit and second semantic unit (see [0166] and [0167], lines 7-11).

Referring to claim 4, Sull discloses the method of claim 1, wherein the keyword is classified into one of predetermined categories and is stored together with its corresponding category [type of content] in step (d) (see [0300]).

Referring to claim 5, Sull discloses the method of claim 1 or 4, wherein the keyword is classified into a person category [actor], an object category, a time category, or a place category (see [0300]).

Referring to claim 6, Sull discloses the method of claim 1 further comprising (g) storing the keyword together with its similar keywords so that one of the first semantic unit and the second semantic unit associated with both the keyword and the similar keywords are presented to the user as a search result (see [0205]).

Referring to claim 7, Sull discloses the method of claim 1, wherein the length of each first semantic unit and the length of each second semantic unit are determined by a user who constructs the multimedia database (see [0160], lines 1-4).

Referring to claim 8, Sull discloses a multimedia database system, comprising:

- a multimedia database [multimedia database 310], which stores multimedia data (see [0169] and [0310]);

- a keyword database (see [0155]) which stores keywords associated with a plurality of first semantic units which are necessary for searching for the multimedia data, location information of each of the first semantic units of the multimedia data, and location information of at least one second semantic unit of the multimedia data, the multimedia data being divided into a plurality of first semantic units [segments] such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic

unit can be presented to a user upon the keyword-based search (see [0030]; [0061]; and [0204]);

an input unit which receives the location information of each first semantic unit including a start point and an end point of each of the first semantic units, the location information of each second semantic unit including a start point and an end point of the second semantic unit, and the keywords [metadata] (see [0160]); and

a control unit for controlling the process for storing the keywords with the location information of the corresponding first semantic unit and second semantic unit and generating a search result with a different granularity of the search result with the same keyword depending on a user's input requesting one of the first semantic unit and the second semantic unit be presented (see [0166] and [0169]).

Referring to claim 9, Sull discloses the system of claim 8, wherein the input unit receives titles of each first semantic unit and each second semantic unit, and the control unit stores the titles in the keyword database together with their corresponding keywords (see [0166] and [0167], lines 7-11).

Referring to claim 10, Sull discloses the system of claim 8, wherein the input unit receives predetermined categories [type of content] into which the keywords are classified, and the controller stores the keywords with their corresponding category (see [0300]).

Referring to claim 11, Sull discloses the system of claim 8, wherein the keyword database includes a similar keyword database where keywords having

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similar meanings are stored, and when a keyword is input via the input unit, the controller searches the similar keyword database for a keyword that matches the input keyword, and, if there is a search result, stores the input keyword in the keyword database together with its similar keywords obtained from the similar keyword database so that not only a semantic unit corresponding to the input keyword but also semantic units corresponding to its similar keywords can be searched for when a search for the semantic unit of the input keyword or any of its similar keywords is carried out (see [0204]).

Referring to claim 12, Sull discusses a method of constructing a multimedia database, comprising:

(a) setting a length of each of a plurality of first semantic units of multimedia data, the multimedia data being divided into a plurality of first semantic units [segments] such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data according to a user's input (see [0030] and [0067]);

(b) extracting a keyword [metadata] from each first semantic unit (see [0160]);

(c) setting a length of at least one second semantic unit of the multimedia data, the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search [the metadata of segments can form a

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hierarchical structure where the larger segment contains the smaller segments]

(see [0030]; [0061]; and [0204]); and

(d) storing the extracted keyword with its corresponding first semantic unit and second semantic unit, wherein the user controls a granularity of the keyword-based search result with the same keyword by requesting one of the first semantic unit and the second semantic unit be presented (see [0166] and [0169]).

Referring to claim 13, Sull discloses the method of claim 12, wherein (b) comprises:

(b1) extracting voice data from the multimedia data using a speech recognition technique (see [0300]); and

(b2) extracting a predetermined part from the extracted voice data as a keyword (see [0300]).

Referring to claim 14, Sull discloses the method of claim 12, wherein (b) further comprises:

(b3) receiving a first keyword and first keyword information (see [0160]);
and

(b4) extracting the first keyword as a keyword of a first semantic unit when the first semantic unit has the same keyword information as the received keyword information (see [0160]).

Referring to claim 15, Sull discloses the method of claim 14, wherein the keyword information is voice, an image, or text (see [0166]).

Referring to claim 16, Sull discloses a multimedia database system, comprising:

a multimedia database [multimedia database 310], which stores multimedia data (see [0169] and [0310]);

a keyword database (see [0155]) which stores keywords associated with a plurality of first semantic units [segments] which are necessary for searching for the multimedia data, location information of each of the first semantic units of the multimedia data and location information of at least one second semantic unit of the multimedia data, the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords [metadata] of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search (see [0030]; [0061]; and [0204]);

a keyword extraction unit which extracts keywords [metadata] from each first semantic unit (see [0160]); and

a control unit for controlling the process for storing the keywords with the location information of the corresponding first semantic unit and second semantic unit and generating a search result with a different granularity of the search result with the same keyword depending on a user's input requesting one of the first

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semantic unit and the second semantic unit be presented (see [0166] and [0167], lines 7-11).

Referring to claim 17, Sull discloses the system of claim 16 further comprising an input unit which receives the location information of each first semantic unit, including a start point [starting frame number] and an end point [finishing frame number], the location information of each second semantic unit, including a start point and an end point, and the keywords (see [0030]; [0166]; and [1067], lines 7-11).

Referring to claim 18, Sull discloses the system of claim 16, wherein the keyword extraction unit comprises:

a voice extractor which extracts voice data from the multimedia data using a speech recognition technique (see [0300]); and

a part-of-speech extractor which extracts a predetermined part of speech from the voice data extracted by the voice extractor as a keyword (see [0300]).

Referring to claim 19, Sull discloses the system of claim 16 further comprising an input unit which receives a first keyword and first keyword information, wherein the keyword extraction unit extracts the first keyword as a keyword of a first semantic unit when the first semantic unit has the same keyword information as the received keyword information (see [0160]).

Referring to claim 20, Sull discloses a method of providing a multimedia data search service using a system for providing a multimedia data search service, the system including a multimedia database [multimedia database 310] which stores multimedia data (see [0169] and [0310]), and a keyword database

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(see [0155]) which stores keywords associated with a plurality of first semantic units [segments] which are necessary for searching for the multimedia data, location information of each first semantic unit of the multimedia data, and location information of each second semantic unit of the multimedia data, the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search (see [0030]; [0061]; and [0204]), the method comprising:

- (a) receiving a keyword necessary to search for multimedia data (see [0169]);
- (b) allowing a user to select a search unit level from a first semantic unit and a second semantic unit (see [0169]);
- (c) searching for multimedia data with the keyword in a granularity of the search unit level selected by the user (see [0166] and [0169]); and
- (d) outputting a search result to a user, wherein the user controls a granularity of the keyword-based search result with the same keyword by selecting one of the first semantic unit and the second semantic unit be presented (see Fig 28, 61 and 62).

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Referring to claim 21, Sull discloses the method of claim 20, wherein keywords are stored in the keyword database together with their corresponding first and second semantic units' location information and titles, and in (d), titles of searched semantic units are displayed on a screen (see [0166] and [0167], lines 7-11).

Referring to claim 22, Sull discloses the method of claim 20, wherein in (d), the searched semantic units are displayed on a screen together with their respective keywords (see Figs 28, 61 and 62).

Referring to claim 23, Sull discloses a system for providing a multimedia data search service, comprising:

- a multimedia database [multimedia database 310] which stores multimedia data (see [0169] and [0310]);

- a keyword database (see [0155]) which stores keywords associated with a plurality of first semantic units [segments] which are necessary for searching for the multimedia data, location information of each first semantic unit of the multimedia data, and location information of each second semantic unit of the multimedia data, the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can

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be presented to a user upon the keyword-based search (see [0038]; [0061]; and [0204]);

an input unit which receives a keyword [metadata] and a search unit level from a user (see [0160]);

a control unit which searches the keyword database with the keyword received from the user, provides links between resulting search results and places in the multimedia database where the search results are stored, and outputs search results generated with a different granularity of the search result depending on a user's input requesting one of the first semantic unit and the second semantic unit be presented (see [0166] and [0169]); and

a display unit [screen] which displays the search results obtained by the control unit (see [0157]).

Referring to claim 34, Sull discloses a computer-readable recording medium on which a program enabling the method of any of claims 1 through 4, 6, 7, 12 through 15, and 20 through 22 is recorded (see [0159]).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly Lovel
Examiner
Art Unit 2167

23 June 2007
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